

07.1—145 Checking fuel pump and overflow valve

Test values

Fuel pump

Injection pump — abbreviation	M		MW		MRSF
Engine	615, 616		617	616, 617	615, 616, 617
Model	115.1	123.1	115.1	123.1	123.1
Fuel pump Bosch designation	FP/K 22 M 13	FP/K 22 M 14	FP/K 22 MW 3	FP/K 22 MW 7	FP/K 22 M 101

Vacuum	Measuring point	prior to pump input
	at idle speed bar gauge pressure	0.1
Delivery pressure	Measuring point	between fuel main filter and injection pump
	at idle speed bar gauge pressure	0.6—0.8
	at 3000/min bar gauge pressure	min 0.8
Delivery end pressure	at idle speed bar gauge pressure	min 1.1
	at 3000/min bar gauge pressure	min 1.3

Fuel overflow valve

Engine	Opening pressure in bar gauge pressure
615	0.6—0.8
616	
617	min 1.3

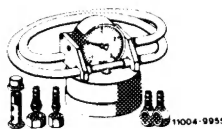
Special tools

Clamp for fuel hose



000 589 40 37 00

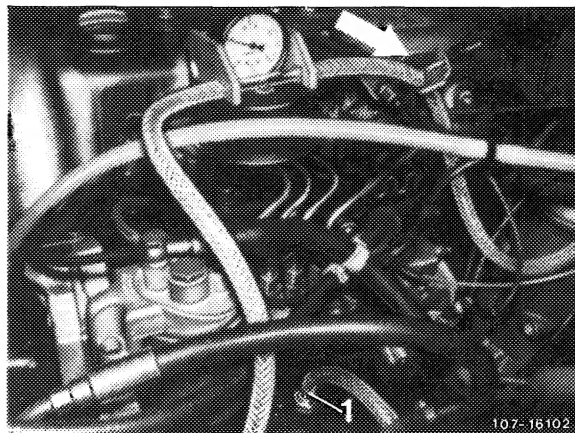
Tester for fuel pump



617 589 04 21 00

Measuring vacuum

1 Connect tester at fuel input (1) on fuel pump. For this purpose, remove fuel feed line. Vent injection system (07.1–140).



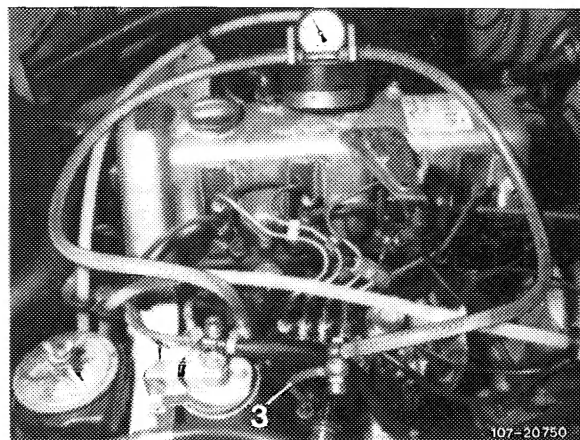
Measure vacuum at idle speed. For this purpose, pinch hose (arrow) on tester behind pressure gauge with a clamp.

If the value is not attained, replace suction and pressure valves or replace fuel pump (07.1–235).

Checking fuel delivery pressure

2 Unscrew fuel line (3) between fuel pump and fuel main filter.

3 Connect tester. For this purpose, connect fuel line together with hose line for tester to a double hollow screw and closing nut. Connect other hose line of tester to fuel filter.



4 Vent injection system (07.1–140).

5 Run engine to operating temperature.

6 Measure fuel delivery pressure at idle speed and at 3000/min.

At idle speed 0.6–0.8 bar gauge pressure.

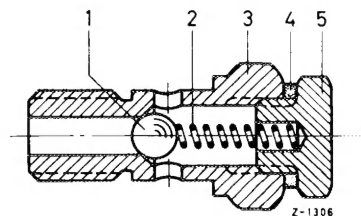
At 3000/min at least 0.8 bar gauge pressure.

7 If delivery pressure is too low:

a) Check overflow valve, while removing, disassembling and cleaning overflow valve on injection pump.

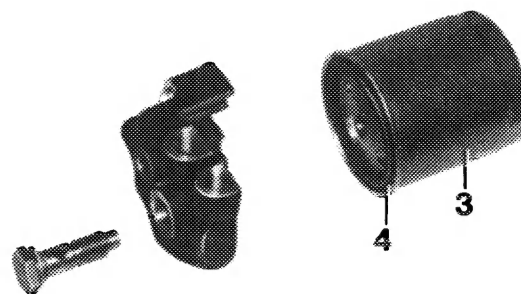
Increase preload of compression spring (2). For this purpose, lengthen compression spring to 26–27 mm.

- | | |
|----------------------|----------------|
| 1 Ball | 4 Sealing ring |
| 2 Compression spring | 5 Closing plug |
| 3 Housing | |



b) Check fuel filter for contamination. Mount new filter element with housing (3) and gasket (4), if required.

c) Replace suction and pressure valve or replace fuel pump (07.1–235).



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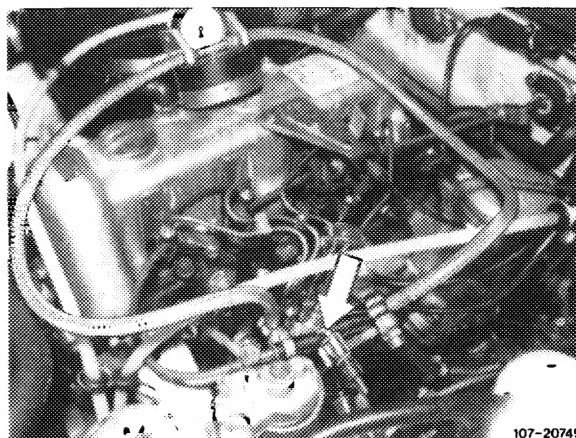
Checking fuel delivery end pressure

8 Pinch fuel return hose with a clamp (arrow).

9 Measure fuel delivery end pressure at idle speed and at 3000/min.

At idle speed min. 1.1 bar gauge pressure.

At 3000/min at least 1.3 bar gauge pressure.



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10 If the delivery end pressure is too low, replace suction and pressure valves or replace fuel pump (07.1–235).